

**ABSTRACT**

Novel mutated mammalian cells are provided that have been characterized by identifying the sequence of the genes that have been mutated. Preferably, novel mutated cells  
5 are murine ES cells that stably incorporate retroviral gene trap constructs in the specifically identified genes. The novel mutated cells and animals are useful in functional genomic analysis, and in the discovery and development of new therapeutic and diagnostics agents and methods.

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